SEQUENCE LISTING

<110> UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.
Przybyla, Alan
Menon, Nanda

<120> RUBREDOXIN FUSION PROTEINS, PROTEIN EXPRESSION SYSTEM AND METHODS

<130> 235.00040201

<140> Unassigned
<141> 1999-12-29

<150> 60/114,034
<151> 1998-12-29

<160> 14

<170> PatentIn Ver. 2.0

<210> 1
<211> 276
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: portion of pRUBEX

<400> 1
catatgaaaa agtacgtatg caccgtctgc ggttacgaat acgaccctgc tgaaggcgac 60
cccgacaacg gcgtgaagcc cggcacctcg ttcgacgacc tgccggccga ctgggtatgc 120
cccgtgtgcg gcgcccccaa gagcgaattc gaagccgcca tgcatggcgg atccgaattc 180
gagaaccatc atcatcatca tcacaacgac tacaaggacg acgatgacaa ggatctgcag 240
agatcttcgg gtacccgcaa gcttgcggcc gcactc 276

<210> 2
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: modified rubredoxin including affinity tag, flag peptide and enterokinase site

<400> 2
Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala
1 5 10 15

Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
20 25 30
Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
35 40 45
Phe Glu Ala Ala Met His Gly Gly Ser Glu Phe Glu Asn His His His
50 55 60
His His His Asn Asp Tyr Lys Asp Asp Asp Asp Lys
65 70 75

<210> 3
<211> 52
<212> PRT
<213> Desulfovibrio vulgaris

<400> 3
Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala
1 5 10 15
Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
20 25 30
Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
35 40 45
Phe Glu Ala Ala
50

<210> 4
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: affinity tag

<400> 4
His His His His His His
1 5

<210> 5
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Flag peptide

<400> 5
Asp Tyr Lys Asp Asp Asp Asp Lys
1 5

<210> 6
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: enterokinase site

<400> 6
Asp Asp Asp Asp Lys
1 5

<210> 7
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: affinity tag

<400> 7
His Gly Leu His
1

<210> 8
<211> 381
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: $A\beta_{1-42}$ rubredoxin fusion construct

<400> 8
atgaaaaagt acgtatgcac cgtctgcggt tacgaatacg accctgctga aggcgacccc 60
gacaacggcg tgaagcccgg cacctcgttc gacgacctgc cggccgactt gggtatgccc 120
cgtgtgcggc gcccccaaga gcgaattcga agccgccatg catggcggat ccgaattcga 180
gaaccatcat catcatcatc acaacgacta caaggacgac gatgacgacg atgacaagga 240
tctgatcgaa ggtcgtgatg cagaattccg acatgactca ggatatgaag ttcatcatca 300
aaaattggtg ttctttgcag aagatgtggg ttcaaacaaa ggtgcaatca ttggactcat 360
ggtgggcggt gttgtcatag c 381

<210> 9
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: $A\beta_{1-42}$ rubredoxin fusion protein

<400> 9
Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala
1 5 10 15
Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
20 25 30

```
Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
          35                  40                  45
Phe Glu Ala Ala Met His Gly Gly Ser Glu Phe Glu Asn His His His
      50                  55                  60
His His His Asn Asp Tyr Lys Asp Asp Asp Asp Lys Asp Leu Ile Glu
 65                  70                  75                  80
Gly Arg Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His
                 85                  90                  95
Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala
             100                 105                 110
Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala
         115                 120
```

<210> 10
<211> 42
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: $A\beta_{1-42}$ peptide

<400> 10
```
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
  1               5                  10                  15
Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
             20                  25                  30
Gly Leu Met Val Gly Gly Val Val Ile Ala
         35                  40
```

<210> 11
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Factor Xa restriction site

<400> 11
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Ile Glu Gly Arg
  1
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<210> 12
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: intervening spacer region

<400> 12

```
Met His Gly Gly Ser Glu Phe Glu Asn His His His His His His Asn
  1               5                  10                  15
Asp Tyr Lys Asp Asp Asp Asp Lys Asp Leu Ile Glu Gly Arg
            20                  25                  30
```

<210> 13
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Flag peptide

<400> 13
Tyr Lys Asp Asp Asp Asp Lys
  1   5

<210> 14
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: $A\beta_{1-40}$ peptide

<400> 14
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
  1   5   10   15
Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
            20   25   30
Gly Leu Met Val Gly Gly Val Val
        35   40